



**Congressional Research Service  
The Library of Congress**

Washington, D.C. 20540

**PAKISTAN'S NUCLEAR ACTIVITIES:  
A CHRONOLOGY OF FOUR ERAS**

**Warren H. Donnelly  
Senior Specialist  
Environment and Natural Resources Policy Division**

**8 March 1987**

ERA I -- AFTER THE SOVIET INVASION OF AFGHANISTAN: 1979 TO DATE

- 09/30/87 -- Scheduled expiration of the President's authority to waive the cutoff of U.S. aid under the Symington Amendment. (Section 669 of the Foreign Assistance Act)
- 03/08/87 -- Islamabad. Pakistan's Minister of State for Foreign Affairs, Zain Noorani, said to its National Assembly that Pakistan would continue peaceful development of nuclear energy and would not bow to pressure from foreigners who fear it may be building atomic bombs. (AP report quoted in the New York Times, Mar. 9, 1987: A2)
- Washington. The Washington Post quoted a State Department official as saying "We think they [Pakistanis] have the capability of producing one [nuclear bomb] now, but we're convinced they don't have one yet." (The Washington Post, Mar. 8, 1987: A28)
- 03/05/87 -- Washington. The Senate Committee on Government Affairs held a hearing on effects of the spread of nuclear weapons. Richard N. Perle, Assistant Secretary of Defense, cautioned it might be counterproductive to cut off U.S. aid to Pakistan since this might induce Pakistan to pursue its weapons interests with even more vigor. (The New York Times, Mar. 6, 1987: A3; The Washington Post, Mar. 6, 1987, A29; Nuclear Fuel, Mar. 9, 1987: 1, 2)
- Washington. The House Committee on Foreign Affairs, Subcommittee on Asian and Pacific Affairs, held a hearing on foreign aid request for Pakistan.
- 03/02/87 -- London. The Financial Times reported that Dr. A. Q. Kahn had denied the report in the London Observer that he had made any claim about Pakistan having a bomb or weapons-grade uranium or plutonium. (The Financial Times [London] Mar. 2, 1987: 2)
- 03/01/87 -- New Delhi. News reports of an interview with Abdul Qadeer Kahn, head of Pakistan's nuclear research, by an Indian journalist who quoted Kahn as saying Pakistan possessed a nuclear bomb. (The Observer (London), Mar. 1, 1987; also the New York Times, Mar. 2, 1987)
- 02/16/87 -- Islamabad. U.S. Ambassador Hinton in a speech at Pakistan's Institute of Strategic Studies warned about Pakistan's nuclear activities and cautioned that it was "open to question" whether the President could again certify to Congress that Pakistan had no nuclear explosive devices if he were to conclude that "Pakistan had in

hand, but not assembled, all the needed components for a nuclear explosive device." (New York Times, Feb. 20, 1987: A3)

- 01/01/87 -- Islamabad. Indian Foreign Secretary Venkate Swaran told reporters of "very good progress" on negotiations of an agreement not to attack each other's nuclear installations. (Nucleonics Week, Jan. 1, 1987: 12)
- 11/27/86 -- Islamabad. Pakistan is cooperating with a number of Muslim countries in peaceful use of nuclear energy and is willing to extend this cooperation to others, President General Zia Ul-Haq told reporters at a meeting of the Organization of Islamic Countries. (Nucleonics Week, Nov. 27, 1986: 4)
- 11/05/86 -- Washington. The Washington Post reported that a Special National Intelligence Estimate earlier this year had cited numerous activities that conflict with Pakistan's denials about developing nuclear weapons. (The Washington Post, Nov. 5, 1986: A29)
- 11/04/86 -- Washington. The Washington Post said that according to intelligence reports, Pakistan has enriched uranium to 93.5% and also has detonated high explosive devices as part of a continuing effort to build an implosion type nuclear weapon. (The Washington Post, Nov. 4, 1986: A1)
- 11/04/86 -- Islamabad. Top-ranking Pakistani officials rejected reports that it was developing weapons-grade uranium and a triggering mechanism for a nuclear device. According to Foreign Secretary Abdul Sattar, Pakistan's research aims at developing a low-level fuel-grade enrichment capability for its proposed Chashma nuclear power project. "While some progress has been made in that direction, the enrichment level has remained well within limits of the research and development program for fuel." (The Washington Post, Nov. 5, 1986: A29)
- 10/27/86 -- Washington. President Reagan signed and sent to Congress the certification that Pakistan does not possess a nuclear explosive device and that proposed U.S. assistance for FY87 will reduce significantly the risk that Pakistan will possess such an explosive.
- 09/15/86 -- Beijing. Pakistan and PRC signed a comprehensive agreement for peaceful nuclear cooperation covering the design, construction and operation of research and power reactors; but specifying the cooperation is solely for peaceful purposes and not for the development of any explosive devices for military purposes. In Washington, a Reagan Administration official said it is still U.S. policy to discourage other countries from having any significant nuclear cooperation with Pakistan until it places all of its nuclear facilities under IAEA safeguards. (Nuclear Fuel, Sept. 22, 1986: 9)

- 09/10/86 -- India's Prime Minister Rajiv Gandhi charged that Pakistan "is continuing a program to build nuclear weapons and the United States is doing nothing to prevent it." (The Washington Post, Sept. 12, 1986: A25)
- 07/31/86 -- Islamabad. Upon returning from his trip to the United States and Europe, Pakistani Prime Minister Muhammed Khan Junejo announced that French Prime Minister Jacques Chirac and he had decided to end the dispute over France's 1974 contract to supply Pakistan with a reprocessing plant. (Nucleonics Week, July 31, 1986: 8)
- 07/17/86 -- Washington. Pakistan's Prime Minister, Mohammed Khan Junejo, in an interview of the NBC-TV's "Today" show says his country has no intention of building a nuclear weapon, and that its enrichment program is for peaceful purposes only.
- 07/16/86 -- Washington. Pakistani Prime Minister Junejo denies that his country is developing nuclear weapons, after being warned by the White House that such action would end U.S. economic and military assistance. Also, meeting with the Senate Foreign Relations Committee, he reportedly said that whatever nuclear work is going forward is for civil purposes and to meet the needs of a developing country, and that Pakistan is abiding by U.S. guidelines. (The Washington Post, July 17, 1986, p. A21)
- Representative Wolpe criticizes Pakistan on apparent construction of nuclear weapons, cites destabilizing effects. (Cong. Rcd. p. H4487, daily ed.)
- 07/15/86 -- News report that the Soviet Union has warned Pakistan about its nuclear activities in direct and unusually tough terms, and that the Reagan Administration has responded with a private message to Moscow reiterating the strong U.S. commitment to Pakistan's security. (The Washington Post, July 17, 1986, p. A21)
- 07/13/86 -- Washington. In a special supplement in the Washington Post, the Pakistan government discussed many items including nuclear power. Concerning enrichment at Kahuta it said that the "modest exercise there in uranium enrichment is on a research and development scale. It is solely motivated by a desire to achieve a degree of self-reliance in the front end of the nuclear fuel cycle, i.e. a 3 percent enrichment of uranium." Higher enrichment is "far beyond Kahuta's capability or Pakistan's intention.
- 07/--/86 -- Washington. At a state dinner, Prime Minister Junejo said Pakistan had offered various ideas for the renunciation of nuclear weapons in the region, and that he would agree to sign a non-proliferation treaty if India did. (The Christian Science Monitor, July 18, 1986, p. 8)

- 06/30/86 -- Report that Abdul Qadir Khan confirmed on Pakistan television that Pakistani scientists and engineers are working to develop indigenous facilities for the nuclear fuel cycle so Pakistan can have its own reactor and its own fuel. (Nuc. Fuel, June 30, 1986, p. 2)
- 03/31/86 -- New Delhi. The Indian Defense Ministry's annual report for 1985-86 says that Pakistan's determined quest for making a nuclear bomb and China's modernization program with military overtones have obvious bearing on India's security. (Delhi General Overseas Service, cited in FBIS/NPD Apr. 23, 1986, p. 53)
- 02/10/86 -- Islamabad. Prime Minister Junejo reiterates that Pakistan's nuclear program is totally peaceful and its only aim is the people's social and economic prosperity. (Address at the 20th anniversary of PINSTECH. Karachi Domestic Service, translated in FBIS/NPD Mar. 6, 1986, p. 33)
- 02/06/86 -- Islamabad. The arrival of the French Foreign Ministry's secretary general will provide opportunity for officials of Pakistan and France to attempt to resolve the festering bitter dispute over the reprocessing plant at Chashma. (The Muslim, FBIS/NPD, Mar. 6, 1986, p. 32)
- 12/21/85 -- Islamabad. Visiting Canadian Foreign Minister Joe Clark says that Canada would not resume nuclear fuel supplies to Pakistan because Islamabad does not seem ready to adhere to Canada's strict standards for nuclear cooperation. (FBIS/NDP, Feb. 4, 1986, p. 46)
- 12/17/85 -- President Zia of Pakistan and Prime Minister Gandhi of India pledge not to attack each other's nuclear facilities. (The New York Times, Dec. 18, 1985 p. 1)
- 12/--/85 -- Pakistan is elected a member of the IAEA Board of Governors for a term of two years.
- 10/30/85 -- TASS quotes the Indian Tribune as reporting Pakistan ready to test a nuclear explosive in China, in the Taklamakan desert. (FBIS/NPD, Nov. 25, 1985, p. 43)
- 10/23/85 -- New York. President Zia addresses the United Nations General Assembly. He reaffirms Pakistan's policy of "developing nuclear energy for peaceful purposes only and its irrevocable commitment not to acquire nuclear weapons or nuclear explosive devices. He reiterated Pakistan's proposals to India which include: simultaneous accession by India and Pakistan to the NPT; (2) simultaneous acceptance by both of full-scope IAEA safeguards; (3) mutual inspection of each other's nuclear facilities; (4) joint declaration renouncing the acquisition or development of nuclear weapons; and (5) establishment of a nuclear weapons free zone in South Asia.

- 10/22/85 -- PRAVDA says Pakistan has either already tested nuclear weapons in Xinjiang, China, or is on the verge of doing so. (FBIS/NPD, Nov. 25, 1985, p. 64)
- 10/--/85 -- President Reagan certifies to Congress that Pakistan did not possess a nuclear explosive device, and that U.S. security assistance would reduce significantly the risk that Pakistan would possess such a device. (Dept. of State, Daily Press Briefing, July 15, 1986, p. 2)
- 09/28/85 -- The U.S. Ambassador to Pakistan says in Lahore that the United States is prepared to cooperate with Pakistan in nuclear energy if it will accept full-scope safeguards. (Nuc. Eng. Int., Dec. 1985, p. 8)
- 08/08/85 -- President Reagan signs the International Security and Development Cooperation Act of 1985, P.L. 99-83. It amended the Foreign Assistance Act of 1961 by adding a prohibition of assistance, sales or transfers of military equipment or technology to Pakistan unless the President certifies during each fiscal year to Congress that Pakistan does not possess a nuclear explosive device and that the proposed U.S. assistance will significantly reduce the risk that Pakistan will possess such a device. The Act also amended the Foreign Assistance Act to prohibit military and economic assistance to any non-nuclear weapons state which illegally exports, or attempts to illegally export, from the United States items which would "contribute significantly" to the ability of such country to make a nuclear explosive device.
- 07/25/85 -- New Delhi. French embassy officials dismiss a claim by India that France is planning to sell a nuclear reactor to Pakistan. (Journal of Commerce, July 25, 1985, p. 9A)
- 06/20/85 -- The IAEA Board of Governors approves continuation of technical assistance to Pakistan to modernize control and instrumentation systems for the PINSTECH reactor. (Nuc. Week, June 20, 1985, p. 17)
- 06/12/85 -- Pakistan's Foreign Minister, Zain Noorani, says Pakistan has a peaceful atomic program has no capability to develop bombs; and that Pakistan is prepared, jointly with India, either to adhere to the non-proliferation treaty or to accept full-scope IAEA safeguards. (FBIS/NPD, July 15, 1985, p. 59)
- 06/04/85 -- Senator Proxmire cautions against further spread of nuclear weapons, refers to Pakistan. (Cong. Rcd, p. S7298, daily ed.)
- 06/--/85 -- ABC News says that Pakistan has successfully detonated the triggering package for a nuclear weapon, using a U.S.-made krytron. (L. Spector, The Nuclear Netherworld. Issues in Science and Technology, Summer, 1986, p. 98)

- 05/01/85 -- President Reagan transmits to Congress a report on Pakistan's nuclear program. (Exec. Comm. 1159, to the House Committee on Foreign Affairs. Cong. Rcd. May 1, 1985, p. H2787)
- 05/--/85 -- Pakistan. As many as five 1000 MWe nuclear reactors will be required during the next two decades, according to the Pakistan Atomic Energy Commission. Its latest assessment of electricity needs indicates that if the total generating capacity is to reach 18,000 MWe by the year 2000, the required nuclear share will be at least 5,000 MWe. (Nuc. Eng. Int., April 1985, p. 15)
- 04/25/85 -- New Delhi. Pakistan's ambassador to India quotes President Zia as having said that Pakistan has enriched uranium up to 5 percent, and said Pakistan has no intention of developing an atomic bomb. (The Washington Times, April. 26, 1985, p. 5A)
- Karachi. French Ambassador Roger Duzer reportedly discloses that France has not closed the chapter on the sale of a reprocessing plant to Pakistan, and that discussions continued. (Nuc. Week, April 25, 1985, p. 19)
- 03/28/85 -- Pakistan. PAEC is modernizing the instrumentation and controls of the 5 MWe research reactor at PINSTECH. (Nuc. Week, Mar. 28, 1985, p. 11)
- 03/25/85 -- Lahore. PAEC Chairman Munir Ahmed Khan makes a strong plea for waiver of all restrictions on transfer of nuclear technologies from industrialized to developing countries. (His inaugural address at the 7th working group meeting of the Regional Cooperative agreement of the IAEA.) (Karachi Dawn, Mar. 26, 1985, cited in FBIS/NPD May 23, 1985, p. 74)
- The journal of the PAEC said that Pakistan is able to explore and mine its own uranium, refine and upgrade it, fabricate it into fuel, and finally use it in a commercial power reactor to produce electricity. (Nuc. Fuel, Mar. 25, 1985, p. 10)
- Pakistan is planning to establish 5,000 MWe of nuclear capacity by the year 2000, including a 900 MWe nuclear unit to be commissioned by the early 1990's (Statement by PAEC chairman Munir Ahmad Khan at working group meeting of the IAEA in Lahore. (Karachi Domestic Service. Cited in FBIS/NDP Apr. 29, 1985, p. 41)
- 03/01/85 -- President Zia in an interview reiterates that enrichment from the Kahuta plant is less than 5 percent. (Christian Science Monitor, March 1, 1985)
- 03/--/85 -- Report that Pakistan has laid off 200 workers at the Kahuta enrichment plant and also assigned some non-nuclear duties to A. Q. Kahn. (Foreign Report, March 1985)

- 02/25/85 -- American intelligence officials reported to confirm Pakistan has enough plutonium and highly enriched uranium to make nuclear weapons. (The New York Times, Feb. 25, 1985, p. A1, A8)
- Washington. The State Department, responding to reports that Pakistan tried to get timing devices from the U.S. for nuclear bomb triggers (krytrons), said that the Pakistani Government has give assurances that its nuclear program is peaceful in intent, and that the United States does not believe Pakistan has nuclear explosive devices or that it is in a position to make them. (The New York Times, Feb. 26, 1985, p. 10)
- 02/24/85 -- President Zia reportedly announces Pakistan had been able to produce a small amount of low-enriched uranium. (Spector, New Nuclear Nations, 1985, p. 118)
- Washington. The Government of Pakistan operated within the United States for nine months in an attempt to illegally obtain timing devices (krytrons) that could trigger a nuclear bomb. (The New York Times, Feb. 25, 1985 p. 1)
- 02/13/85 -- In an interview in Pakistan, Peter Tempus, IAEA deputy director general for safeguards, expresses satisfaction on the way IAEA safeguards are implemented in Pakistan. (Nuc. Week, Feb. 14, 1985, p. 13)
- 01/20/85 -- Beginning of President Reagan's second term.
- 12/--/84 -- Spain's nuclear engineering firm, Sener SA, is to extend its open-ended contract with Pakistan's Atomic Energy Commission for two more years. (Nuc. Week, Dec. 6, 1984, p. 9)
- During a visit to Pakistan, West German chancellor Helmut Kohl told President Zia that German assistance may be available for the 900 MWe Chashma nuclear power plant if Pakistan signs the non-proliferation treaty. (Nuc. Eng. Int., Dec. 1984, p. 8)
- 11/18/84 -- Pakistan. At a press conference, Soviet Ambassador Vitali Simirnov says it would not be possible for the Soviet Union to participate in Pakistan in the construction of an atomic power plant, but gives no specific reasons. (Nuc. Week, Nov. 22, 1984, p. 1)
- 11/16/84 -- Pakistan's Foreign Minister, Yaqub Ali Kahn, on a visit to Washington reportedly gives the White House a reply to President Reagan's letter of September that indicates Pakistan' readiness to adopt the U.S. recommended approach for enrichment at Kahuta. (Spector, New Nuclear States, p. 117)
- 10/04/84 -- Pakistan denies its graphite purification is for its nuclear program. (Nuc. Week, Oct. 4, 1984, p. 3.)



- 09/30/84 -- Karachi. Dr. Abdul Qadir Kahn, head of Pakistan's enrichment project, said in an exclusive interview with Alami Islamia Digest, that Pakistan has perfected the process for enriching uranium and if it wanted to do so, could make not only an atomic bomb but a hydrogen bomb as well. (Karachi Jasarat, translated in FBIS/NPD Nov. 2, 1984, p. 39)
- 09/12/84 -- President Reagan, in a letter to Pakistani President Zia, warns that Pakistan risks losing U.S. military because of its nuclear program. (Wall Street Journal, October 25, 1984, Foreign Report, December 1984, p. 37)
- 08/14/84 -- Unconfirmed report that China has supplied Pakistan with some highly enriched uranium. (Financial Times, Aug. 14, 1984)
- 08/02/84 -- Report of Pakistan producing pure graphite for reactor use. (Nuc. Week, August 2, 1984)
- 07/26/84 -- A senior Reagan Administration official reportedly says that Pakistan has produced weapons grade uranium at its Kahuta enrichment plant. (Washington Times, July 26, 1984 p. 1A)
- Representative Stark advocates cutting all U.S. aid to Pakistan and other nations that continuing atmospheric testing of nuclear weapons; denounces Pakistan's pursuit of nuclear weapons capability. (Cong. Rcd., p. E3317)
- Three Pakistanis indicted for attempting to ship to Pakistan electronic parts (krytrons) that could be used in atomic weapon triggers. (The Washington Post, July 17, and July 21, 1984, p. A3)
- 07/24/84 -- Washington. Pakistan is secretly producing weapons-grade nuclear material at its Kahuta uranium enrichment facility according to a senior administration official. (The Washington Times, July 25, 1984)
- 07/16/84 -- Houston. A federal grand jury indicts three Pakistanis for trying to ship parts for nuclear weapons to Pakistan, court records showed. (The Washington Post, July 17, 1984)
- 07/10/84 -- Islamabad. In an address to parliament, President Zia says Pakistan has a research and development project for uranium enrichment at Kahuta. It is of modest scale and designed entirely for acquiring technology to meet Pakistan's future power generation requirements. Also the plutonium facility at PINSTECH is too small to produce enough material even over a period of several decades for a single explosive device; and Pakistan has no team for designing nuclear weapons. (Information Division, Embassy of Pakistan)

- Rawalpindi. President Zia in an interview says he remained confident that U.S.-Pakistani cooperation to deter further Soviet expansion would not be disrupted by renewed congressional allegations that his country was rapidly developing a nuclear bomb. He flatly denied the allegation and charged that Senator Cranston was ill informed and politically motivated. (The Wall Street Journal, July 10, 1984, p. 1)
- 07/05/84 -- Pakistan's Atomic Energy Commission budget for 1984-85 is \$35 million, including \$10 million for the Chashma nuclear power project and \$4.5 million for a classified fuel reprocessing project. It does not mention the enrichment work at Kahuta. (Nuc. Week, July 5, 1984, p. 13)
- 07/--/84 -- Three Pakistani arrested in Houston while attempting to smuggle high-speed electronic switches (krytrons) to Pakistan. The Washington Post, July 21, 1984)
- 06/25/84 -- Senator Cranston places in the Congressional Record a corrected version of his remarks of last week on Pakistan's nuclear activities. He cites four new facts as indicating Pakistan has "acquired all the capability necessary to produce its own nuclear weapons:" (1) Pakistan has operated and expanded its clandestine enrichment facility at Kahuta; (2) Pakistan has operated its clandestine reprocessing facility at PINSTECH; (3) Pakistan has expanded its weapons design team and stepped up imports of nuclear warhead parts; and (4) Pakistan's KANUPP reactor has been subject to continuing failures in its safeguards system, making plutonium diversion highly feasible. (Cong. Rcd., June 25, 1984, p. S8147 - daily ed.)
- Senator Cranston inserts his speech to the Jonathan Institute Conference on International Terrorism on the threat of nuclear weapons spread in Iran, Iraq, Libya and Pakistan. (Cong. Rcd., p. S8144)
- 06/22-23/84 -- Reports that China has helped Pakistan with enrichment. (The New York Times, June 22, 1984, June 23, 1984)
- 06/21/84 -- Senator Alan Cranston details evidence that Pakistan can produce nuclear weapons; says Pakistan has completed construction of 1000 centrifuge units at Kahuta, enough to produce 15 kilograms of highly enriched uranium annually. (Cong. Rcd., p. S7901)
- Senator Cranston calls the attention of the Senate "substantial new evidence that Pakistan has acquired all the capability necessary to produce its own nuclear weapons." (Cong. Rcd., June 21, 1984, p. S7901)

- 06/09/84 -- Washington. Despite repeated assurances from Pakistan that it is not developing nuclear weapons, U.S. officials remain concerned about signs of continuing nuclear activities there. Spokesmen for both the White House and the State Department describe this concern, responding to a speech by Senator Cranston asserting that Pakistan has continued a broad-based program that may be nearing the nuclear weapons testing stage. (The Wall Street Journal, June 10, 1984, p. 58)
- 06/--/84 -- Pakistan. Having received no bids for a 900 MWe unit at Chashma from 12 suppliers originally approached in December 1982, Pakistan has put back the target date for completion to 1991, and has left the call for bids open. (Nuc. Eng. Int., June 1984, p. 13)
- 03/--/84 -- The Senate Foreign Relations Committee at the request of the Reagan administration, substitutes an alternative amendment to the foreign assistance authorization for 1984-85 to require that as a condition of supply the President certify that Pakistan did not possess an actual nuclear explosive device. (L. Spector, Nuclear Proliferation Today, p. 103)
- 03/28/84 -- Senators John Glenn and Alan Cranston propose an amendment to the 1984-85 foreign assistance authorization to cut off U.S. aid to Pakistan unless the President certifies that Pakistan does not possess a nuclear explosive device, and was not acquiring the technology, equipment or material for manufacturing or detonating one. The Foreign Relations Committee passed this unanimously. (Spector, Nuclear Proliferation Today, p. 102)
- 03/20/84 -- Islamabad. President Zia reappoints Munir Ahmad Kahn as chairman for Pakistan's Atomic Energy Commission for another three years.
- 02/23/84 -- Senator Humphrey calls for reassessment of U.S. nuclear export standards and puts into the record articles about the nuclear capabilities of Pakistan and other countries. (Cong. Rcd., p. S1651)
- 02/09/84 -- Lahore. In an interview in Nawa-i-Waqt, Abdul Qadir Kahn says that Pakistan could enrich uranium and produce its own atomic bomb if necessary. (The New York Times, Feb. 10, 1984, p. A4)
- 02/--/84 -- Abdul Qadir Kahn, head of Pakistan's uranium enrichment project, says in an interview that Pakistan is now among the few countries in the world that can "efficiently enrich uranium." He also said Pakistan has the capacity to make an atom bomb. (The Washington Post, Feb. 10, 1984)
- In another interview, Kahn says an explosion is not necessary to gain a nuclear capability, (Nuc. Fuel, Feb. 27, 1984, p. 11)
- President Zia reportedly said "Pakistan had acquired very modest research and development capability very successfully . . . for peaceful purposes." (Nuc. Fuel, Feb. 27, 1984, p. 11)

- 12/31/83 -- Deadline for submitting bids for large nuclear power plant in Pakistan passes without any bids having been submitted.
- 12/22/83 -- Pakistan asks the Soviet Union for help in construction of the proposed 937 MWe Chashma nuclear power plant. (Nuc. Week, Dec. 22, 1983, p. 3)
- 12/--/83 -- Pakistan's Finance Minister Ghulam Ishaque during a visit to Moscow requests Soviet aid for the Chashma nuclear power project. (Nuc. Week, Dec. 22, 1983, p. 3)
- 11/10/83 -- Report that Pakistan's Planning Minister, Mahboob-ul-Haq, said nuclear power could be produced at half the cost from other fuels, and that under no circumstance would Pakistan abandon the Chashma project and yield to the policy of "nuclear colonization." (Nuc. Week, Nov. 10, 1983, p. 8)
- 11/--/83 -- Report the French government has refused to let Framatome bid on Pakistan's proposed Chashma nuclear power plant. (Nuc. Eng. Int., Nov. 1983, p. 4)
- 07/08/83 -- Canadian Minister for External Affairs, Allan MacEachen, says in Islamabad that there can be no nuclear cooperation between Canada and Pakistan until the latter signs the non-proliferation treaty or agrees to full-scope safeguards. (Nuc. Week, July 14, 1983, p. 8)
- 04/07/83 -- Report that the Reagan Administration was furious over French Foreign Minister Claude Cheysson's statement in Islamabad last week that France would not require full-scope safeguards for supply of a nuclear power plant. The U.S. has been working to convince other suppliers to require full-scope safeguards as a condition. (Nuc. Week, Apr. 7, 1983, p. 5)
- 04/--/83 -- The French reactor supplier, Framatome, reportedly was authorized by the French Government to bid on the 900 MWe nuclear power plant for Chashma. (Nuc. News, April 1983, p. 87)
- 03/03/83 -- The IAEA Director General, Hans Blix, informed the Agency's Board of Governors last week that the IAEA was again able to properly safeguard the KANUPP nuclear power plant. (Nuc. Week, Mar. 3, 1983, p. 1)
- 03/--/83 -- French Foreign Minister Claude Cheysson says in Islamabad that France was prepared to sell to Pakistan a large nuclear power plant, and that he did not agree with the U.S. position that sales not be made to countries with some unsafeguarded nuclear facilities. (Nuc. News, Mid-April, 1983, p. 25A)
- 02/--/83 -- Report that China has provided Pakistan with sensitive information about design of nuclear weapons. (The Washington Post, Feb. 28, 1983)

- 12/09/82 -- Report that Pakistan has invited bids for a 900-1000 MWe nuclear power plant for Chashma and that tender documents had been issued to over a dozen qualified nuclear suppliers. (Nuc. Week, Dec. 9, 1982, p. 3)
- 12/07/82 -- President Zia and President Reagan meet at the White House. Zia is forcefully reminded of the U.S. commitment against nuclear proliferation and belief that Pakistani security will not be assisted by nuclear weapons. Zia stresses his country has no intention of developing nuclear weapons, but forcefully argues the right of developing countries to have nuclear energy. (The Washington Post, p. A1, and the New York Times, Dec. 8, 1983 p. A6)
- 11/--/82 -- Pakistan agrees to allow installation of new safeguards equipment at KANUPP. (The Washington Post, Nov. 17, 1982, p. A25)
- 10/10/82 -- Pakistan is trying to revive nuclear cooperation with Canada. President Zia tells reports he would try to convince the Canadian leaders that Pakistan's nuclear program is for peaceful purposes. (Nuc. Week, Oct. 14, 1982, p. 4)
- 09/--/82 -- U.S. officials reportedly are disturbed by intelligence reports suggesting that China has helped Pakistan with uranium enrichment. (The New York Times, Sept. 19, 1982)
- 08/19/82 -- A Reagan administration official in an interview indicates China has provided Pakistan with sensitive information about design of nuclear weapons. (Nuc. Week, Aug. 19, 1982, p. 2)
- 06/17/82 -- Report that the Reagan Administration is trying to bring potential suppliers of a large nuclear power plant to Pakistan into line with U.S. policy of requiring full-scope safeguards. (Nuc. Week, June 17, 1982, p. 1)
- 04/20/82 -- U.S. Ambassador Ronald I. Spiers, in a speech at the Karachi Institute of Foreign Relations, warns that U.S. aid would be jeopardized if Pakistan begins to reprocess spent fuel at its unsafeguarded New Labs plant. (International Communications Agency news release, Apr. 20, 1982, p. 13)
- 04/15/82 -- Report that Pakistan's National Economic Council approved construction of a 937 MWe nuclear unit at Chashma at an estimated cost of \$1.5 billion. (Nuc. Week, Apr. 15, 1982, p. 2)
- 03/05/82 -- IAEA safeguards agreement for the Pakistan Research Reactor enters in to force. (IAEA Information Circular 34)
- 02/11/82 -- President Reagan uses his authority under section 669 of the Foreign Assistance Act to waive the cut-off of U.S. economic and military aid to Pakistan.

- 01/26/82 -- Paris. President Zia says that his country has no intention of acquiring a nuclear arsenal, and that it has neither the capacity nor the intention of producing nuclear arms. (This in response to a news report that Pakistan would be able to detonate a nuclear device within three years. (The New York Times, Jan. 26, 1982, p. A3)
- 01/23/82 -- Washington. Report of a CIA report that concludes Pakistan could detonate a nuclear device within the next three years, but is not likely to do so. (The New York Times, Jan. 24, 1982, p. 6)
- /--/82 -- Cold test of pilot reprocessing plant at Rawalpindi (Spector II)
- 12/29/81 -- P.L. 97-113 enacted, adding a new Section (620E) to the Foreign Assistance Act of 1961 which allows the President to waive the prohibition on aid under Section 669, The Glenn-Symington amendment, in order to provide aid to Pakistan. Also section 670 was amended to cut off economic and military aid to any country which transfers a nuclear explosive device to a non-nuclear weapons state, or is a non-nuclear weapons state and receives such a device or detonates one.
- 11/19/81 -- Report that in October, U.S. customs officials arrested a retired Pakistan army colonel trying to smuggle some zirconium metal onto an airplane in New York City. (The New York Times, Nov. 20, 1981, p. 1)
- 10/08/81 -- Pakistan could be ready to accept bids for a 600-900 MWe nuclear unit at Chasma in the first half of 1982, according to a well informed source. (Nuc. Week, Oct. 8, 1981, p. 2)
- 10/--/81 -- IAEA director general Sigvaard Eklund advised the IAEA Board of Governors that because Pakistan was able to fabricate fuel for KANUPP, the Agency could no longer certify that diversion had not occurred, and urged Pakistan to permit a substantial upgrading of the existing safeguards agreement for KANUPP. (Nuc. Week, Oct. 8, 1981, p. 6; Nov. 12, 1981, p. 4)
- 09/30/81 -- The Reagan Administration arms control and intelligence officials and international atomic energy inspectors are investigating what they describe as "suspicious" activities at Pakistan's nuclear power reactor. Administration officials stressed, however, that there was no proof that a diversion had occurred. (The New York Times, Sept. 30, 1981, p. 1)
- 09/25/81 -- Senator Cranston inserts in the record his testimony before the Senate Foreign Relations Committee opposing waiver on non-proliferation restriction on military sales to countries building nuclear weapons capabilities; refers to Pakistan's request for F-16 aircraft. (Cong. Rcd., p. S10519, daily ed.)

- 07/16/81 -- President Reagan says in a nuclear policy statement, in part, that his administration will continue to inhibit the transfer of sensitive nuclear items, particularly where the danger of proliferation demands, and to seek agreement on requiring IAEA safeguards for all nuclear activities in a nonnuclear weapons state as a condition for any significant new nuclear supply commitment.
- 07/02/81 -- West German firms reported to have supplied aluminum rods, vacuum pumps and other equipment to Pakistan. (Das Stern, July 2, 1981, p. 1-6)
- 06/28/81 -- Report of a State Department cable to the U.S. embassy in Turkey to urge the Turkish government to end secret shipments to Pakistan of sensitive equipment that could be used to build an atomic bomb. The State Department also said that Pakistan was actively seeking technology and material to make fuel for explosive devices, and was working to development of the triggering package for nuclear explosive devices. (The Washington Post, June 28, 1981, p. A16)
- 06/24/81 -- A State Department official testifies before the non-proliferation subcommittee of the Senate Committee on Governmental Affairs that U.S. military aid to Pakistan would advance U.S. non-proliferation policy and that President Zia had assured him it was not the intention of the Pakistan government to develop nuclear weapons. Nonetheless, he acknowledged that Pakistan appeared to be working towards a nuclear weapons capability. (Spector, Nuclear Proliferation Today, 91)
- 06/21/81 -- Report that Pakistan has been designing and building non-nuclear parts for nuclear weapons since 1981. (The Washington Post, June 28, 1981, p. A16)
- 06/02/81 -- Report that Turkish firms have resold U.S.-supplied electrical inverters to Pakistan, presumably for the enrichment project. (The Washington Post, June 28, 1981, p. A16)
- 06/--/81 -- U.S. and Pakistan agree upon a six-year \$3.2 billion aid plan, including 40 F-16 aircraft.
- 06/--/81 -- The Reagan Administration authorizes resumption of military and economic aid to Pakistan cut off by the Carter Administration in April 1979. (The Washington Post, June 28, 1981, p. A16)
- 05/14/81 -- Report of Soviet willingness to assist Pakistan's nuclear development. (Nuc. Week, May 14, 1981, p. 7)
- 04/--/81 -- Pakistan and the IAEA begin negotiations to upgrade safeguards for the KANUPP reactor.

- 03/26/81 -- Report that the Swiss firm, Cora Engineering, has halted deliveries to Pakistan of items believed destined for the enrichment facility after threats against the company and a bomb attack against one executive. (Nuc. Week, Mar. 26, 1981, p. 7)
- 03/17/81 -- Senator Cranston warns that Pakistan -- through continued purchases of sensitive hardware and dual-use technology in Europe -- has achieved swift progress toward completing their new small reprocessing plant and has continued development of larger reprocessing and enrichment plants which could be used in weapons production. "The Government of Pakistan is apparently pressing ahead to a point where it will most likely have the capability and material for fabricating a number of nuclear weapons by the end of 1982." (Cong. Rcd., Mar. 17, 1981, p. S2236.)
- 01/18/81 -- Report that Saudi Arabia offered Pakistan \$800 million to help make an H-bomb, on condition that the technology did not get into the hands of Iraq. (London Sunday Times, quoted in FBIS/NDP, Feb. 26, 1981, p. 1; also Foreign Report, Jan. 14, 1981, p. 1-2)
- 01/20/81 -- Beginning of President Reagan's first term.
- /--/81 -- Pakistan said to be preparing a nuclear test site. (L. Spector, Nuclear Proliferation Today, 1984, p. 70)
- 12/31/80 -- Report that British firms sold 31 electrical inverters to Pakistan and a metal finishing plant. (The Times of India, Dec. 31, 1980, FBIS/NDP, Feb. 10, 1981, pp. 36-37)
- 12/04/80 -- An Italian subsidiary to the French nuclear firm SGN reportedly supplied special steel vessels to Pakistan.
- 12/--/80 -- Canada charges three men with illegally exporting certain U.S. electronic components to Pakistan (Washington Post; Dec. 7, 1980)
- 09/23/80 -- Munir Ahmed Kahn at the IAEA General Conference explains Pakistan's interest in reprocessing and eventually, in breeder reactors. (GC XXIV/INF/195, p. 2.)
- Report of a secret Pakistan effort to build a small reprocessing plant at PINSTECH (The Washington Post, Sept. 23, 1980)
- Report that Swiss firms have supplied Pakistan with parts and equipment possible for its enrichment project. (Nuc. News, Feb. 1981, p. 56)
- Report that Pakistan has nearly completed construction of the New Labs reprocessing plant, with a capacity 1/10th that of Chashma, and could produce 10-20 kg plutonium annually. (The Washington Post, Sept. 23, 1980)



- 09/21-23/80 -- Reports that the Swiss government knowingly did not stop exports of sophisticated nuclear technology to Pakistan despite U.S. objection. (Washington Post, Sept. 21, 1980; New York Times, Sept. 23, 1980; Washington Star, Sept. 23, 1980)
- 09/01/80 -- Reports that Pakistan completed a nuclear fuel fabrication plant to supply the KANUPP reactor (Nuc. Week, Sept. 4, 1980, p. 11)
- 06/18/80 -- French firms reported to have sold to Pakistan equipment of potential use in its reprocessing plants, including dissolvers, evaporators, mixer-settlers, and special vessels. (Foreign Report, June 18, 1980, p. 2)
- 05/--/80 -- Report that PAEC has contracted with a Spanish firm for the first phase of design for a new nuclear power plant. (Nuc. Eng. Int., May 1981, p. 4)
- 04/10/80 -- Report that a Norwegian government-owned company has supplied Pakistan with zirconium tubes. (Attenposten, [Oslo] April 10, 1980. Cited in FBIS/NPD, June 25, 1980, pp. 1-2)
- 04/--/80 -- Two Dutch firms reportedly sent sensitive equipment to Pakistan, including 6,200 tubes of special steel. (Nuc. Eng. Int., April 1980, p. 67; Nuc. News, April 1980, p. 67)
- 03/18/80 -- The Senate Foreign Relations Committee held a hearing on India and Pakistan nuclear issues.
- 02/28/80 -- Report that during a visit of a senior State Department official, Pakistan refuses to rule out testing of a peaceful nuclear explosive device. (The New York Times, Feb. 28, 1980)
- 02/01/80 -- The Carter Administration decides to seek an exemption to the cut off of economic and military aid to Pakistan under the Symington amendment. (The New York Times, Feb. 1, 1980)
- 02/--/80 -- Niger sold 110 tons of uranium yellow-cake to Pakistan. (Nuc. Eng. Int., Feb. 1980: p. 11; Nuc. News, Feb. 1980, p. 91.)
- U.S. officials visiting Islamabad offered increased aid, but also warned President Zia that a nuclear test would end any renewed U.S. assistance. (L. Spector, Nuclear Proliferation Today, p. 85)
- 01/07/80 -- Munir Ahmad Kham, chairman of the PAEC, says the necessary preliminaries for a 600-900 MWe nuclear power plant have been completed, and construction at Chasma could begin as soon as the "difficult financial position becomes easier." (FBIS/NPD, Feb. 1, 1980, p. 20)
- /--/80 -- Start up of small heavy water plant at Multan.
- Start up of uranium purification facility.

----- Start up of nuclear fuel fabrication plant as Chasma.

----- Start up of uranium conversion plant at Dera Ghazi Kahn.

ERA II -- THE ZIA PRESIDENCY: 1977 TO 1979

- 12/25/79 -- Soviet troops invade Afghanistan.
- 11/25/79 -- Reports that Pakistan had obtained from Libya as much as 100 metric tons of uranium concentrate (yellowcake) not subject to IAEA safeguards. (Washington Star, Nov. 25, 1979)
- 11/21/79 -- Islamabad. The U.S. embassy is burned.
- 10/--/79 -- A Pakistani foreign affairs adviser tell members of Congress that President Zia is willing to pledge no detonations during his current administration. (Washington Post, Oct. 20, 1979)
- 09/17/79 -- Pakistan announces it intends to complete the Chashma reprocessing plant despite loss of French aid. (Nuc. Fuel, Sept. 17, 1979, p. 10)
- 09/06/79 -- Representative Stark urges U.S. to renounce use of nuclear weapons and inserts article on Pakistan's development of nuclear weapons. (Cong. Rcd., p. E4295)
- 08/17/79 -- According to U.S. intelligence officials, foreign intelligence indicate that an underground nuclear test site is being prepared in southern Pakistan. (The New York Times, Aug. 17, 1979)
- 08/12/79 -- Reports that the Carter Administration is preparing to step up its efforts to stop Pakistan's sensitive nuclear activities. Options included an offer to supply F-16 aircraft, or stronger economic sanctions, or covert action to disable the enrichment plant. (The New York Times, Aug. 12, 1979)
- 05/01/79 -- The Subcommittee on Energy, Nuclear Proliferation and Federal Services, Senate Committee on Governmental Affairs hold a hearing on the nuclear situation in India and Pakistan.
- 04/07/79 -- The Carter Administration reported to cut aid to Pakistan in dispute over Pakistan's enrichment effort. (The Washington Post, Apr. 7, 1979)
- 04/--/79 -- The Carter Administration formally cut off economic aid and military assistance after attempts failed to persuade President Zia to abandon the Kahuta centrifuge enrichment project.
- 10/--/78 -- U.S. military and economic aid to Pakistan is restored after the earlier cut off in September 1977 because of Pakistan importing items for its reprocessing plant in September 1977.
- 09/--/78 -- Gen. Zia-ul-Haq becomes President of Pakistan.

- 08/--/78 -- France stops performing under the reprocessing supply contract with Pakistan. (L. Spector, Nuclear Proliferation Today, p. 80)
- Mid/78 -- Press reports that two years earlier Pakistan had organized clandestine procurement of parts for an unsafeguarded centrifuge enrichment plant, thus circumventing existing nuclear supplier controls.
- 03/10/78 -- President Carter signs the Nuclear Non-Proliferation Act of 1978, P.L. 95-242, which imposed conditions on U.S. nuclear cooperation that would prevent U.S. nuclear cooperation with Pakistan.
- 10/03/77 -- President Carter signs the International Financial Institution Act of 1977 (P.L. 95-118) Section 701 directs the secretary of State to instruct American executive directors at multilateral lending institutions to take into account in deciding on loans whether the recipient nation has detonated a nuclear device, or is not a party to the Nuclear Non-Proliferation Treaty.
- 09/01/77 -- The IAEA director general receives information from the Pakistan Atomic Energy Commission on advances in nuclear energy during 1976-77. Concerning nuclear power generation, PAEC said Pakistan would need more than 30,000 MWe of electricity by the end of the century, with 16,000 MWe to come from nuclear energy.
- 09/--/77 -- The U.S. cuts off economic and military aid to Pakistan because of its continued receipt of French help with the Chashma reprocessing plant. (L. Spector, Nuclear Proliferation Today, p. 80)
- 08/04/77 -- President Carter signs the International Security Assistance Act of 1977, P.L. 94-329, amending the Symington amendment by providing different conditions for cut-off of U.S. economic and military assistance in connection with supply or receipt of the wherewithal to reprocess spent fuel. This new amendment (The Glenn amendment) added a new section 670 that provides for cutoff to any country that delivers or receives such assistance, and to any non-nuclear weapons state that detonates a nuclear explosive, with authority for a Presidential waiver if certain findings are made. (The Glenn-Symington Amendment)

ERA III -- BHUTTO'S ADMINISTRATION AFTER INDIA TEST:  
1974 TO 1977

- 07/05/77 -- Pakistan's Chief of the Army Staff, Gen. M. Zia-ul-Haq, deposes Prime Minister Bhutto, proclaims martial law, and takes control of the administration.
- 06/--/77 -- France begins to delay performance under the Chashma reprocessing contract and to add new conditions. (L. Spector, Nuclear Proliferation Today, p. 80.
- 04/07/77 -- President Carter in his statement on nuclear power policy voices concern for the further spread of nuclear weapons, which would be "vastly increased" by the "further spread of sensitive nuclear technologies" entailing access to plutonium or highly enriched uranium. He announces the U.S. will indefinitely defer commercial reprocessing and recycling of plutonium and continue to embargo the export of equipment or technology for enrichment or reprocessing.
- 03/02/77 -- IAEA safeguards agreement with Pakistan for yellowcake, from Niger, enters into force. (INFCIRC/248)
- 01/20/77 -- Beginning of President Carter's term.
- 01/--/77 -- Pakistan says it will reduce KANUPP's electrical output while it tries to find an alternative source of nuclear fuel it can no longer get from Canada, which wants Pakistan to sign the non-proliferation treaty or accept full-scope IAEA safeguards. (Nuc. Week, Jan. 6, 1977, p. 6)
- 12/16/76 -- France declares it would discontinue exports of reprocessing facilities until further notice. This did not apply, however, to the existing contract with Pakistan.
- 10/28/76 -- President Ford in his nuclear policy statement calls for a world-wide moratorium on supply of reprocessing technology.
- 06/30/76 -- President Ford signs the International Security and Arms Export Control Act of 1976 (P.L. 94-329), amending the Foreign Assistance Act to cut off U.S. economic and military assistance to any country which delivers or receives technologies for reprocessing and enrichment unless certain conditions are met. (The Symington Amendment)

- 03/18/76 -- Trilateral safeguards agreement of the IAEA, France and Pakistan for the Chashma reprocessing facility enters into force.  
(INFCIRC/239)
- Start-up of heavy water upgrading unit at Karachi.
- Secretary of State Kissinger advises Prime Minister Bhutto that completion of the Chashma reprocessing plant would trigger a cut-off of U.S. economic and military assistance.
- 12/--/75 -- Canada cuts off supply of fuel and spare parts for KANUPP; Pakistan had refused to agree to continuation of safeguards at KANUPP if its agreement for nuclear cooperation with Canada were ended.
- 07/28/75 -- A BBC report says the French Embassy in Brussels had informed the French Foreign office that the PAEC chief had declared that whether or not the French Pakistan reprocessing deal went through, Pakistan plans to get a plant to make the small amount of plutonium needed for an explosive device using plutonium from KANUPP.
- 02/--/75 -- The Ford administration lifts the U.S. arms embargo on Pakistan, begun in 1971 at the time of the Bangladesh War.
- /--/75 -- Abdul Qadir Kahn leaves a Dutch engineering firm, the Physical Dynamics Research Laboratory (FDO) to return to Pakistan. FDO was helping to build the Dutch centrifuge enrichment plant at Almelo. (L. Spector, Nuclear Proliferation Today, p. 76)
- France insists that the Chashma reprocessing plant be under IAEA safeguards.
- 12/--/74 -- Canada revises its non-proliferation policy to require as a condition for supply either ratification of the NPT or an equivalent political commitment to non-proliferation, and accepted full scope safeguards.
- 10/--/74 -- The French firm, Saint-Gorbain Techniques Norvelles (SGN) signs an agreement for construction of a large reprocessing plant in Pakistan. (L. Spector, Nuclear Proliferation Today, p. 75)
- 08/09/74 -- Beginning of President Ford's term.

ERA IV -- FIRST STEPS: 1955 TO 1974

- 05/18/74 -- India detonates a nuclear device in the Rajasthan desert near the Pokharan mountains, with a reported yield of 15 kilotons.
- /--/74(?) Pakistan begins construction of a small, secret reprocessing facility adjacent to the Pakistan Institute of Nuclear Science and Technology. (L. Spector, Nuclear Proliferation Today, p. 75)
- 12/06/73 -- Beginning of President Nixon's second term.
- 03/--/73 -- The French company SGN and Pakistan signed a contract for basic design of a reprocessing plant at Chashma. (Weissman and Krosney, p. 75)
- /--/73 -- Pakistan's Prime Minister Bhutto begins negotiations with France for purchase of a large reprocessing plant to be located at Chashma. (Weissman and Krosney, p. 162)
- 01/--/72 -- After taking office, Prime Minister Bhutto convenes a group of scientists and announces that Pakistan would develop atomic weapons. (Weissman and Kronsey, p. 75)
- /--/72 -- Start up of KANUPP, 125 MWe nuclear power plant at Karachi.
- /--/72 -- Pakistan has fewer than 600 nuclear scientists trained to the master's and doctoral levels. (Pakistan Atomic Energy Commission)
- 11/71-03/72 -- India defeats Pakistan in the second war. Eastern half of Pakistan becomes Bangladesh.
- /--/71 -- Prime Minister Bhutto removes Ishrat Usmani as head of the PAEC because of his reported opposition to nuclear arms and appointed Munir Kahn, a supporter of nuclear weapons. (L. Spector, Nuclear Proliferation Today, p. 72)
- After taking office, Prime Minister Bhutto convened a group of scientists and announced that Pakistan would develop atomic weapons. (Weissman and Kronsney, Islamic Bomb, p. 75)
- 03/05/70 -- The Nuclear Non-Proliferation Treaty enters into force. Pakistan was not a party.
- 10/17/69 -- Trilateral safeguards agreement of the IAEA, Canada and Pakistan enters into force for the KANUPP reactor. (INFCIRC/135)
- 01/20/69 -- Beginning of President Nixon's first term.
- /--/69 -- The PAEC establishes a reactor school.

- 06/17/68 -- IAEA safeguards agreement for Pakistan's KANUPP booster rods enters into force. (INFCIrC/116)
- /--/65 -- PINSTECH, the Pakistan Institute of Science and Technology, Pakistan's principal nuclear research facility is established in Nilore, near Rawalpindi.
- 11/22/63 -- Beginning of President Johnson's term.
- Pakistan signs an agreement with Canada to buy a Canadian heavy water power reactor.
- Pakistan begins operating its first research reactor under IAEA safeguards.
- 01/20/61 -- Beginning of President Kennedy's term.
- /--/61 -- Pakistan contracts with a Belgian company, Belgo-Nucleaire, to build a hot cell suitable for reprocessing at PINSTECH.
- /--/60 -- The U.S. and Pakistan allows their agreement for nuclear cooperation to expire, anticipating that Pakistan could seek further nuclear assistance through the International Atomic Energy Agency.
- The U.S. Atomic Energy Commission approves a grant of \$350,000 to Pakistan for installation of a 5 MWe pool type research reactor at Rawalpindi, estimated total cost of the project \$3.5 million.
- /--/59 -- The Pakistan Atomic Energy Commission is established, modelled after the U.S. Atomic Energy Commission.
- 09/01-13/58 -- The second United Nations International Conference on the Peaceful Uses of Atomic Energy in Geneva.
- The International Atomic Energy Agency is established with Pakistan as a member.
- 07/29/57 -- President Eisenhower ratified the international statute to establish the International Atomic Energy Agency.
- The International Atomic Energy Agency is established in Vienna.
- 09/20/56 -- The statute for the International Atomic Energy Agency is opened for signature at the United Nations.
- 04/16/56 -- The Argonne National Laboratory initiates a third course in the International School of Nuclear Science and Engineering. Some of the 62 students came from Pakistan.
- 03/26/56 -- The Islamic republic of Pakistan is proclaimed.



- 03/--/56 -- USAEC technical personnel visit Pakistan to discuss atomic energy programs.
- 08/08-20/55 The first International Conference on Peaceful Uses of Atomic Energy, in Geneva.
- 08/11/55 -- The U.S. agreement for nuclear cooperation with Pakistan takes effect.
- 03/14/55 -- The U.S. Atomic Energy Commission opens training in reactor technology at the Argonne School of Nuclear Science and Engineering. The first class included 31 foreign students.
- /--/55 -- The U.S. Atomic Energy Commission concludes an agreement for cooperation in nuclear research with Pakistan.
- Pakistan establishes an Atomic Energy Commission (PAEC), to survey the nation's uranium resources, establish a nuclear research center, and provide advice.
- The U.S. Atomic Energy Commission begins negotiations of agreements for cooperation in civil uses of nuclear energy with 27 countries, including Pakistan. The agreements cover exchange of unclassified information on design, construction, and operation of research.
- 12/08/53 -- President Eisenhower's Atoms-for-Peace speech to the United Nations.
- 08/30/54 -- President Eisenhower signs the Atomic Energy Act of 1954, P.L. 83-703, opening the way for U.S. nuclear cooperation with other countries.
- 01/20/53 -- Beginning of President Eisenhower's administration.
- 08/14/47 -- Pakistan is constituted as a Dominion under the Indian Independence Act of 1947.
- 08/01/46 -- President Truman signs the Atomic Energy Act of 1946, cutting off virtually all U.S. nuclear cooperation with its wartime allies and other countries.
- 08/09/45 -- The U.S. atom bombs Nagasaki.
- 08/06/45 -- The U.S. atom bombs Hiroshima.

- 07/16/45 -- The U.S. tests the first nuclear explosive at Alamogordo, New Mexico.
- 04/12/45 -- Beginning of President Truman's administration.

---

Abbreviations used:

Cong. Rcd.	- Congressional Record
FBIS/NPD	- Foreign Broadcast Information Service
Nuc. Eng. Int.	- Nuclear Engineering International
Nuc. Fuel	- Nuclear Fuel
Nuc. Week	- Nucleonics Week